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EXAMINER

VU, THONG H

ART UNIT	PAPER NUMBER
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2142

DATE MAILED: 05/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/820,008

Applicant(s)

OGISHI ET AL.

Examiner

Thong H. Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

1. Claims 1-12 are pending.

Response to Arguments

2. Applicant's arguments filed 4/14/05 have been fully considered but they are not persuasive to overcome the prior art.

A. As per claim 1, Applicant argues the prior art does not teach "calculation the different between a sequence numbers of the first DATA segment and a sum of a sequence number of the last DATA segment".

Examiner notes Susai taught an Internet environment wherein the monitoring (i.e.: detecting) the network traffic including calculation the different between a sequence numbers of the first DATA segment and a sum of a sequence number of the last DATA segment [Susai, starting sequence number of 2000, col 8 line 5-col 9 line 25; checksum and the last successfully received byte of data, col 5 lines 8-20].

B. As per claim 1, Applicant argues the prior art does not teach "transmitted segment obtained by counting a total amount of detected data segment" and "transmitted the bytes obtained by calculating the first data segment and a sum of a sequence number of the last detected data segment and a user length of said last detected data segment"

Examiner points out the prior art taught transmitted segment obtained by starting the first data segment by using the starting sequence number; counting (i.e.: incrementing) a total of segment or specifying a length of 50 bytes [Susai, col 8 line 1-col 9 line 25]; and transmitted the bytes obtained by calculating the first segment and the sum (i.e.: checksum) of sequence number [Susai, the first byte of data, calculate

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and recalculate the sequence number, the checksum data segment, col 5 lines 8-50, col 6 lines 31-51] using the last segment and a user length of the last segment [Susai, the last bytes of data, col 5 lines 8-20; client specifying length, col 8 lines 5-col 9 line 25].

C. As per claim 3, Applicant argues the prior art does not teach the last ACK or DATA segment.

Examiner notes the prior art taught the last bytes of DATA [Susai, the last successfully received byte of data, col 5 lines 16] or the last ACK [Packer, First ACK, Last ACK and counting, col 5 lines 1-59, col 6 lines 30-48].

D. As per claim 5, Applicant argues the prior art does not teach "judging and obtaining step".

Examiner notes the prior art taught the judging and obtaining step as calculating and recalculating [Susai, col 5 lines 8-50].

E. As per claim 7, Applicant argues the prior art does not teach "ACK number, window size of newly detected ACK segment are equal to the determined ACK number and the determined window size".

Examiner notes the prior art taught ACK number [Susai, ACK segment specifying a sequence number to ACK 2000, ACK 2001, ACK 4001, ACK 1000-5000, ACK 7000, col 8 line 5-col 9 lines 20]; window size [Susai, web page to client, col 10 lines 7-18; number bytes of data in TCP segment, col 8 lines 1-4. It was clearly that the newly or last ACK number equal to the data segment which determined the length of TCP bytes displayed on web page or window size].

F. As per claim 9, Applicant argues the prior art does not teach "HTTP response time being calculated based on a time different from the detection of the last data segment to the first detection of ACK segment".

Examiner notes the prior art taught the calculating [Susai, col 5 lines 8-50]; HTTP protocol including request and response [Susai, HTTP, col 7 lines 1-30]; monitoring network traffic [Susai, keep track, col 7 lines 5-30; monitor, col 13 lines 10-15] including identifying the first and last segment [Susai, the first and last byte of data, col 5 lines 8-20] wherein the operation looking for avoid the wasting of CPU time [Susai, col 2 lines 1-5].

G. As per claim 11, Applicant argues the prior art does not teach "calculating FTP throughput at a different ratio".

Examiner notes the prior art taught the calculating, FTP using SYN, ACK segment with different ratio [Susai, 49 bytes, 50 bytes, col 8 lines 5-65].

H. There is no motivation or suggestion to combine the prior art to establish *prima facie* obviousness ?

It is the examiner 's position to find any motivating suggestion or combination in the applied references. According MPEP 2143, "Basic Requirement of a Prima Facie case of Obviousness", "To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in rejection under 35 U.S.C. § 103(a), it that the Examiner must meet his burden to the art, to modify the reference to combine the reference teachings. Second, there must be a

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reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all of the claim limitations." *In re Vaeck*, F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

In this instant application, Examiner found the motivation or suggestion to combine the references in the references themselves. Susai suggests that monitoring the Internet traffic for the first and last byte of data segment, the checksum, the sequence number for calculating [Susai, col 5 lines 8-50]. Susai also teaches ACK number, incrementing ACK number [Susai, col 6 lines 31-51; col 8 line 1-col 9 line 20]. Packer, in the same endeavor, teaches the first and last ACK for data flow rate detection for bandwidth allocation and rate control. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the calculating first ACK, last ACK or the data length (i.e.: size) with latency, rate to calculate the traffic over network as taught by Packer into the Susai's apparatus in order to utilize the network monitoring process. Doing so would provide a mechanism needed to control and manage packet traffic efficiently and reduce the waste of server resources.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-2,5-6,12 are rejected under 35 U.S.C. §102(e) as being anticipated by Susai et al [Susai 6,411,986 B1].

4. As per claim 1, Susai discloses a method for collecting statistical traffic data [Susai, monitoring network traffic, col 13 lines 10-15] comprising steps of:

detecting an SYN segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; monitoring network traffic, col 13 lines 10-15; SYN flag, col 8 lines 5-35; two way flow, col 5 lines 52-60, Fig 5; bi-directional, col 6 lines 1-12];

detecting a DATA segment, which belongs to same connection as the detected SYN segment, from said traffic [Susai, sequence number, ACK number and a length of 999, col 8 lines 5-35; reusing the server connection, col 6 line 63-col 7 line 29]; and

obtaining at least one of an amount of transmitted segment at a side which sent the detected SYN segment [Susai, detected GET packet, col 7 lines 5-30], and an amount of transmitted bytes at said side [Susai, SYN flag and GET segment length, col 8 lines 5-65]; wherein said amount of transmitted segment being obtained by counting (i.e.: incrementing) a amount of said detected DATA segment [Susai, incrementing , specifying a length of bytes, col 8 lines 1-col 9 line 25], and said amount of transmitted bytes being obtained by calculating difference between a sequence number of the first detected DATA segment [Susai, client specifying the length of data, col 8 line 1-col 9 line 25], and a sum of a sequence number of the last detected DATA segment and a user data length of said last detected DATA segment [Susai, the first byte of data,

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calculated and recalculated the sequence number and checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52].

5. As per claim 2, Susai-Packer disclose a Method for collecting statistical traffic data comprising steps of:

detecting an SYN-ACK segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; SYN ACK segment, col 8 lines 5-35];

detecting a DATA segment, which belongs to same connection as the detected SYN-ACK segment, from said traffic [Susai, sequence number, ACK number and a length of 999, col 8 lines 5-35, Fig 6A-6B]; and

obtaining at least one of an amount of transmitted segment at a side which sent the detected SYN-ACK segment, and an amount of transmitted bytes at said side [Susai, SYN flag and GET segment length, col 8 lines 5-65];

wherein said amount of transmitted segment being obtained by counting a total amount of said detected DATA segments, and said amount of transmitted bytes being obtained by calculating a difference between a sequence number of the first detected DATA segment [Susai, the length of data, col 8 lines 1-5], and a sum of a sequence number of the last detected DATA segment and a user data length of said last detected DATA segment [Susai, calculated the sequence number and checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52].

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6. As per claim 5, Susai-Packer disclose a Method for collecting statistical traffic data comprising steps of:

detecting an SYN segment from a traffic in the Internet [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; monitoring network traffic, col 13 lines 10-15; SYN flag, col 8 lines 5-35]

detecting a DATA segment, which belongs to one of two directions same connection as the detected SYN segment, from said traffic [Susai, two way flow, col 5 lines 52-60, Fig 5; bi-directional, col 6 lines 1-12];

determining a sequence number of a DATA segment to be sent next, detection of the DATA segment, based on a sequence number of at every the detected DATA segment [Susai, bytes added, col 7 lines 5-30; sequence number, ACK number and a length of 999, col 8 lines 5-35; reusing the server connection, col 6 line 63-col 7 line 29];

judging, at every detection of sequence number of the newly detected DATA segment is less than said determined sequence number at the last DATA segment detection [Susai, calculated the sequence number and checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52; bytes added, col 7 lines 5-30]; and

obtaining, when the sequence number of the newly detected DATA segment is less than said determined sequence number, at least one of a new amount of re-transmitted segment at a side which sent the detected SYN segment, and a new amount of re-transmitted bytes at said side;

wherein said new amount of re-transmitted segment being obtained by adding 1 (i.e.: plus one) to the last obtained amount of re-transmitted segment, and said new

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amount of re-transmitted bytes being obtained by adding a smaller one out of a first value (i.e.: starting sequence number) and a second value (i.e.: the last sequence number) to the last obtained amount of re-transmitted segment, wherein the first value being a difference between said determined sequence number and a sequence number of said newly detected DATA segment, and the second value being a user data length of said newly detected DATA segment [Susai, calculated the sequence number plus one, checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52; col 6 lines 31-52].

7. Claim 6 contains the similar limitations set forth of claim 5, except adding 1(i.e.: plus one) to the last obtained amount of re-transmitted segment [Susai, the next sequence number (or re-transmitted segment) is a sequence number plus one, col 5 lines 8-20]. Therefore, claim 6 is rejected for the similar rationale set forth in claim 5.

8. Claim 12, Susai discloses a Method for collecting statistical traffic data comprising steps:

detecting an SYN segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; monitoring network traffic, col 13 lines 10-15; SYN flag, col 8 lines 5-35; two way flow, col 5 lines 52-60, Fig 5; bi-directional, col 6 lines 1-12];

detecting continuous plural DATA segments, which belong to same connection (i.e.: reuse connection) as the detected SYN segment, from said traffic [Susai,

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monitoring network traffic, col 13 lines 10-15; SYN flag, col 8 lines 5-35; reusing the server connection, col 6 line 63-col7 line 29; using a path name, col 9 lines 25-47]; and calculating, as an FTP throughput at a side which sent the detected SYN segment [Susai, FTP, col 4 lines 50-61], a ratio of a difference, between a sequence number of the first detected DATA segment and a sum of a sequence number of the last detected DATA segment and a user data length of the last detected DATA segment [Susai, client specifying the length of data, col 8 line 1-col 9 line 25; the sequence number, the first and last byte of data, checksum, col 5 lines 7-20], to a time difference from the first detection of the DATA segment to the last detection of the DATA segment [Susai, the CPU time, col 2 line 1; the first and last byte of data, calculated and recalculated the sequence number and checksum, col 5 lines 7-20; col 6 lines 31-52].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3-4,8-11 are rejected under 35 U.S.C. §103 as being unpatentable over Susai et al [Susai 6,411,986 B1] in view of Packer [5,802,106].
10. As per claim 3, Susai-Packer disclose method for collecting statistical traffic data comprising steps of:

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detecting an SYN segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; SYN flag, col 8 lines 5-35];

detecting an ACK segment and a DATA segment, each of which belongs to same connection (i.e.: re-use) as the detected SYN segment, from said traffic [Susai, reusing the server connection, col 6 line 63-col7 line 29]; and

calculating, as an amount of received data at a side which sent the detected SYN segment, a difference between an acknowledgment number of the first detected ACK segment (or DATA segment) and an acknowledgement number of the last detected DATA segment [Susai, calculated the sequence number and checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52; ACK segment specifying a sequence number to 4001, col 8 lines 5-64]

However Susai does not explicitly detail the calculation using the last segment as ACK segment. It was obvious to a skilled artisan using a simple mathematic to obtained a number of transmitted packets either using the first and last sequence numbers of the packets or the length of the last packet segment to calculate the amount of transmitted bytes including the first and last ACK [Packer, col 3 lines 1-34; col 4 lines 10-col 8 line 11; First ACK, Last ACK and counting, col 5 lines 1-59, col 6 lines 30-48].

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the calculating first ACK, last ACK or the data length (i.e.: size) with latency, rate to calculate the traffic over network as taught by Packer into the Susai's apparatus in order to utilize the network monitoring process.

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Doing so would provide a mechanism needed to control and manage packet traffic efficiently and reduce the waste of server resources.

11. As per claim 4, Susai-Packer disclose a Method for collecting statistical traffic data comprising steps of:

detecting an SYN-ACK segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; SYN ACK segment, col 8 lines 5-35; bi-direction, col 6 lines 1-12];

detecting an ACK segment and a DATA segment, each of which belongs to same connection as the detected SYN ACK segment, from said traffic [Susai, reusing the server connection, col 6 line 63-col 7 line 29]; and

calculating, as an amount of received data at a side which sent the detected SYN ACK segment, a difference between an acknowledgment number of the first detected ACK segment or DATA segment and an acknowledgement number of the last detected ACK segment or DATA segment [Susai, calculated the sequence number and checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52] [Packer, col 3 lines 1-34; col 4 lines 10-col 8 line 11].

12. As per claim 7, Susai-Packer disclose a Method for collecting statistical traffic data comprising steps of :

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detecting an SYN segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; SYN flag, col 8 lines 5-35];

detecting an ACK segment, which belongs to same connection as the detected SYN segment, from said traffic [Susai, sequence number, ACK number and a length of 999, col 8 lines 5-35; reusing the server connection, col 6 line 63-col7 line 29];

determining an acknowledgment number of an ACK segment to be sent next and a window size (i.e.: data length) of an ACK segment having the maximum acknowledgement number, at every detection of the ACK segment, based on an acknowledgment number of the detected ACK segment [Susai, maximum offload, col 6 line 59-col 7 line 30];

judging, at every detection of the ACK segment, whether both of an acknowledgement number and a window size of the newly detected ACK segment are equal to said determined acknowledgment number and said determined window size at the last ACK segment detection [Susai, calculated the sequence number and checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52; col 6 lines 31-52];

obtaining, when both of the acknowledgment number and the window size of the newly detected two or more ACK segments are equal to said determined acknowledgement number and said determined window size, a new amount of missing DATA segment at a side which sent the detected SYN segments, by adding 1 to the last obtained amount of missing DATA segment [Susai, the next sequence number is a

sequence number plus one, col 5 lines 8-20] [Packer, First ACK, Last ACK and counting, col 5 lines 1-59, col 6 lines 30-48].

13. Claim 8 contains the similar limitations set forth of apparatus claim 7. Therefore, claim 8 is rejected for the similar rationale set forth in claim 7.

14. As per claim 9, Susai-Packer disclose a Method for collecting statistical traffic data comprising steps of:

detecting an SYN segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; SYN flag, col 8 lines 5-35];

detecting continuous plural DATA segments and continuous plural ACK segments in succession to the DATA segments, all of which belong to same connection as the detected SYN segment, from said traffic [Susai, reusing the server connection, col 6 line 63-col 7 line 29]; and

obtaining at least one of an HTTP response time at a side which sent the detected SYN segment, and an HTTP throughput at said side [Susai, reusing the server connection or HTTP connection, col 6 line 63-col 7 line 29];

wherein said HTTP response time being obtained by calculating [Susai, calculate and recalculate, col 5 lines 8-50] a time difference from the last detection of the DATA segment to the first detection of the ACK segment [Susai, the first and last byte of data, col 5 lines 8-20], and said HTTP throughput [Susai, HTTP, col 7 lines 1-30] being

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obtained by calculating a ratio of a difference [Susai, keep track, col 7 lines 5-30; monitor, col 13 lines 10-15], between an acknowledgement number of the first detected ACK segment and an acknowledgement number of the last detected ACK segment [Susai, calculated the sequence number and checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52], to a time difference [Susai, avoid the wasting of CPU time, col 2 lines 1-5] from the first detection of the ACK segment to the last detection of the ACK segment [Packer, First ACK, Last ACK and counting, col 5 lines 1-59, col 6 lines 30-48].

15. As per claim 10, Susai-Packer disclose a Method for collecting statistical traffic data comprising steps of:

detecting an SYN-ACK segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; SYN ACK segment, col 8 lines 5-35];

detecting continuous plural ACK segments and continuous plural DATA segments in succession to the ACK segments, all of which belong to same connection as the detected SYN-ACK segment, from said traffic [Susai, reusing the server connection, col 6 line 63-col7 line 29]; and

obtaining at least one of an HTTP response time at a side which sent the detected SYN-ACK segment, and an HTTP throughput at said side [Susai, looking for a response time which avoid wasting CPU time, col 1 line 64-col 2 line 5; HTTP col 7 lines 5-30]; wherein said HTTP response time being obtained by calculating a time difference from the last detection of the ACK segment to the first detection of the DATA segment,

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and said HTTP throughput being obtained by calculating a of a difference, between a sequence number of the first detected DATA segment and a sum of a sequence number of the last detected DATA segment and a user data length of the last detected DATA segment, to a time difference from the first detection of the DATA segment to the last detection of the DATA segment [Susai, calculated the sequence number and checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-52; col 6 lines 31-52] [Packer, First ACK, Last ACK and counting, col 5 lines 1-59, col 6 lines 30-48].

16. As per claim 11, Susai-Packer disclose a Method for collecting statistical traffic data comprising steps of:

detecting an SYN-ACK segment from a traffic in one of two directions on the Internet line [Susai, the servers are collectively Internet traffic, col 4 lines 1-10; SYN ACK segment, col 8 lines 5-35];

detecting continuous plural ACK segments, which belong to same connection as the detected SYN-ACK segment, from said traffic [Susai, reusing the server connection, col 6 line 63-col 7 line 29]; and

calculating, as an FTP throughput at a side [Susai, FTP, col 4 lines 50-61] which sent the detected SYN-ACK segment, a ratio of a difference [Susai, calculating, FTP using SYN, ACK segment with different ratio, 49 bytes, 50 bytes, col 8 lines 5-65], between an acknowledgement number of the first detected ACK segment and an acknowledgement number of the last detected ACK segment [Susai, calculated the sequence number and checksum, the last byte of data, col 5 lines 7-20; col 6 lines 31-

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52; col 6 lines 31-52], to a time difference from the first detection of the ACK segment to the last detection of the ACK segment [Packer, First ACK, Last ACK and counting, col 5 lines 1-59, col 6 lines 30-48].

Thus, the prior art taught all limitations of the claims language.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Thong Vu, whose telephone number is (571)-272-3904. The examiner can normally be reached on Monday-Thursday from 7:00AM- 3:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, *Rupal Dharia*, can be reached at (571) 272-3880. The fax number for the organization where this application or proceeding is assigned is 703-872-9306

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval IPAIRI system. Status information for published applications may be obtained from either Private PMR or Public PMR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thong Vu
Patent Examiner
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